

Interactive comment on “Continuous national Gross Domestic Product (GDP) time series for 195 countries: past observations (1850–2005) harmonized with future projections according to the Shared Socio-economic Pathways (2006–2100)” by Tobias Geiger

Anonymous Referee #2

Received and published: 23 January 2018

The author presents a combination of existing datasets for GDP which have been standardised in various projects by various authors but never as far as I know in a journal publication, creating a useful dataset from 1850-2100 subject to the many assumptions made by the government. It is important to note firstly the limitations of using a combination of Penn World Tables, and Maddison values given the differing approaches often used to come up with their GDP values.

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1) I would like to see the currency conversions made by the authors for each country, as the homogenous joining of datasets needs to be consistent in the periods where there are hyperinflation; large changes in currency, or differing values per year.

2) Datasets: There appears to be some inconsistencies in the final year of the files with the ;; reading in errors. Despite this, a sanity check of a few countries seems plausible.

The PPP conversions need to be better explained within the text and the assumptions made. The use of the SSPs is of course a key to why the PPPs were chosen in 2005, but why not use more than 1 year of PPP conversions, and what are the uncertainties?

I am missing also the context as to the quality of the overlaps between the various datasets, which likely needs to be explained for a reasonably constant country i.e. New Zealand, and a very volatile country (Zimbabwe).

Aruba (the first line) does not inspire me with confidence in this method - as it shows an 85% reduction in GDP in the period from 2005-2009, where Aruba was a reasonably constant country.

A sensitivity analysis is required for the input datasets and the uncertainties in the overlaps.

I also did not read much about border changes, and adjusting boundaries with respect to the GDP estimate adjustments, which should be alluded to and explained - "Existing discrepancies were harmonized and an interval between 2005 and 2010 was used to allow for a smooth transition to SSP projection" is not a reasonable explanation and details should be shown for the examples talked about (Yugoslavia, Colonial Africa etc.)

3) Quality of writing etc. The paper itself was coherently written, and although some of the figures are complicated and likely could be simplified for visual purposes (Fig 2), the writing is adequate.

- issues like GPD (should be GDP) in the abstract, and another check as to units should

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be made.

All in all, this paper should be a useful addition to the journal, but needs some additional work to clear up some of the unknowns in the dataset combinations.

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2017-80>, 2017.